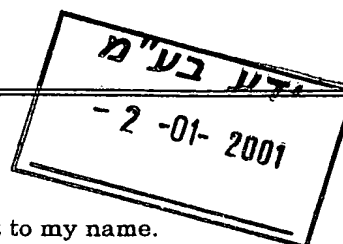


DECLARATION AND POWER OF ATTORNEY  
FOR PATENT APPLICATIONS

PATENT

Docket No. : 36256/DBP/C608



As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled **OPTICAL RESONATORS WITH DISCONTINUOUS PHASE ELEMENTS**, the specification of which is attached hereto unless the following is checked:

X was filed on 29 April 1998 as United States Application Number or PCT International Application Number PCT/IL98/00204 and was amended on \_\_\_\_\_ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or § 365(b) of the foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)

<u>Application Number</u>	<u>Country</u>	<u>Filing Date (day/month/year)</u>	<u>Priority Claimed</u>
120754	Israel	01.May.1997	Yes

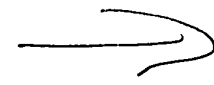
I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below.

<u>Application Number</u>	<u>Filing Date</u>
---------------------------	--------------------

I hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s), or any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

<u>Application Number</u>	<u>Filing Date</u>	<u>Patented/Pending/Abandoned</u>
---------------------------	--------------------	-----------------------------------

**POWER OF ATTORNEY:** I hereby appoint the following attorneys and agents of the law firm CHRISTIE, PARKER & HALE, LLP to prosecute this application and any international application under the Patent Cooperation Treaty based on it and to transact all business in the U.S. Patent and Trademark Office connected with either of them in accordance with instructions from the assignee of the entire interest in this application; or from the first or sole inventor named below in the event the application is not assigned; or from SANFORD



**DECLARATION AND POWER OF ATTORNEY  
FOR PATENT APPLICATIONS**

**Docket No. 36256/DBP/C608**

38

T. COLB & CO. in the event the power granted herein is for an application filed on behalf of a foreign attorney or agent.

R. W. Johnston	(17,968)	John D. Carpenter	(34,133)	Lucinda G. Auciello	(42,270)
D. Bruce Prout	(20,958)	David A. Plumley	(37,208)	Norman E. Carte	(30,455)
Hayden A. Carney	(22,653)	Wesley W. Monroe	(39,778)	Joel A. Kauth	(41,886)
Richard J. Ward, Jr.	(24,187)	John W. Eldredge	(37,613)	Patrick Y. Ikehara	(42,681)
Russell R. Palmer, Jr.	(22,994)	Gregory S. Lampert	(35,581)	Mark Garscia	(31,953)
LeRoy T. Rahn	(20,356)	Grant T. Langton	(39,739)	Gary J. Nelson	(44,257)
Richard D. Seibel	(22,134)	Constantine Marantidis	(39,759)	Raymond R. Tabandeh	(43,945)
Walter G. Maxwell	(25,355)	Daniel R. Kimbell	(34,849)	Phuong-Quan Hoang	(41,839)
William P. Christie	(29,371)	Craig A. Gelfound	(41,032)	Jun-Young E. Jeon	(43,693)
David A. Dillard	(30,831)	Syed A. Hasan	(41,057)	Kathy Mojibi	(41,409)
Thomas J. Daly	(32,213)	Kathleen M. Olster	(42,052)	Cynthia A. Bonner	(44,548)
Vincent G. Gioia	(19,959)	Daniel M. Cavanagh	(41,661)	Marc A. Karish	(44,816)
Edward R. Schwartz	(31,135)	Molly A. Holman	(40,022)		

The authority under this Power of Attorney of each person named above shall automatically terminate and be revoked upon such person ceasing to be a member or associate of or of counsel to that law firm.

**DIRECT TELEPHONE CALLS TO :** D. Bruce Prout, 626/795-9900  
**SEND CORRESPONDENCE TO :** CHRISTIE, PARKER & HALE, LLP  
 P.O. Box 7068, Pasadena, CA 91109-7068

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first joint inventor Yochay Danziger	Inventor's signature X	Date X
Residence and Post Office Address Sdeh Nachum Street 5/26, 75284 Rishon LeZion, Israel		Citizenship Israeli

Full name of second joint inventor Asher A. Friesem	Inventor's signature X Asher A. Friesem	Date X Nov. 17/99
Residence and Post Office Address Weizmann Institute of Science, Neve Metz 15, 76100 Rehovot, Israel		Citizenship Israeli

Full name of third joint inventor Ram Oron	Inventor's signature X R. Oron	Date X Nov 17, 1999
Residence and Post Office Address Busel Street 26, 76404 Rehovot, Israel		Citizenship Israeli

**DECLARATION AND POWER OF ATTORNEY  
FOR PATENT APPLICATIONS**

PATENT

Docket No. : 36256/DBP/C608

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled **OPTICAL RESONATORS WITH DISCONTINUOUS PHASE ELEMENTS**, the specification of which is attached hereto unless the following is checked:

X was filed on 29 April 1998 as United States Application Number or PCT International Application Number PCT/IL98/00204 and was amended on \_\_\_\_\_ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or § 365(b) of the foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)

<u>Application Number</u>	<u>Country</u>	<u>Filing Date (day/month/year)</u>	<u>Priority Claimed</u>
120754	Israel	01.May.1997	Yes

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below.

<u>Application Number</u>	<u>Filing Date</u>
---------------------------	--------------------

I hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s), or any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

<u>Application Number</u>	<u>Filing Date</u>	<u>Patented/Pending/Abandoned</u>
---------------------------	--------------------	-----------------------------------

**POWER OF ATTORNEY:** I hereby appoint the following attorneys and agents of the law firm CHRISTIE, PARKER & HALE, LLP to prosecute this application and any international application under the Patent Cooperation Treaty based on it and to transact all business in the U.S. Patent and Trademark Office connected with either of them in accordance with instructions from the assignee of the entire interest in this application; or from the first or sole inventor named below in the event the application is not assigned; or from SANFORD

**DECLARATION AND POWER OF ATTORNEY  
FOR PATENT APPLICATIONS.**

**Docket No. 36256/DBP/C608**

T. COLB & CO. in the event the power granted herein is for an application filed on behalf of a foreign attorney or agent.

R. W. Johnston	(17,968)	John D. Carpenter	(34,133)	Lucinda G. Auciello	(42,270)
D. Bruce Prout	(20,958)	David A. Plumley	(37,208)	Norman E. Carte	(30,455)
Hayden A. Carney	(22,653)	Wesley W. Monroe	(39,778)	Joel A. Kauth	(41,886)
Richard J. Ward, Jr.	(24,187)	John W. Eldredge	(37,613)	Patrick Y. Ikehara	(42,681)
Russell R. Palmer, Jr.	(22,994)	Gregory S. Lampert	(35,581)	Mark Garscia	(31,953)
LeRoy T. Rahn	(20,356)	Grant T. Langton	(39,739)	Gary J. Nelson	(44,257)
Richard D. Seibel	(22,134)	Constantine Marantidis	(39,759)	Raymond R. Tabandeh	(43,945)
Walter G. Maxwell	(25,355)	Daniel R. Kimbell	(34,849)	Phuong-Quan Hoang	(41,839)
William P. Christie	(29,371)	Craig A. Gelfound	(41,032)	Jun-Young E. Jeon	(43,693)
David A. Dillard	(30,831)	Syed A. Hasan	(41,057)	Kathy Mojibi	(41,409)
Thomas J. Daly	(32,213)	Kathleen M. Olster	(42,052)	Cynthia A. Bonner	(44,548)
Vincent G. Gioia	(19,959)	Daniel M. Cavanagh	(41,661)	Marc A. Karish	(44,816)
Edward R. Schwartz	(31,135)	Molly A. Holman	(40,022)		

The authority under this Power of Attorney of each person named above shall automatically terminate and be revoked upon such person ceasing to be a member or associate of or of counsel to that law firm.

**DIRECT TELEPHONE CALLS TO : D. Bruce Prout, 626/795-9900**  
**SEND CORRESPONDENCE TO : CHRISTIE, PARKER & HALE, LLP**  
**P.O. Box 7068, Pasadena, CA 91109-7068**

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

*On behalf of Yochay Danziger*

Full name of sole or first joint inventor <b>Yochay Danziger</b>	Inventor's signature <i>[Signature]</i>	Date <b>Jan 12, 2000</b>
Residence and Post Office Address <b>Sdeh Nachum Street 5/26, 75284 Rishon LeZion, Israel</b>		Citizenship <b>Israeli</b>

Full name of second joint inventor <b>Asher A. Friesem</b>	Inventor's signature <i>[Signature]</i>	Date <b>Nov. 17/99</b>
Residence and Post Office Address <b>Weizmann Institute of Science, Neve Metz 15, 76100 Rehovot, Israel</b>		Citizenship <b>Israeli</b>

Full name of third joint inventor <b>Ram Oron</b>	Inventor's signature <i>[Signature]</i>	Date <b>Nov 17, 1999</b>
Residence and Post Office Address <b>Busel Street 26, 76404 Rehovot, Israel</b>		Citizenship <b>Israeli</b>

Docket No.

36256/DBP/C608

CHRISTIE, PARKER & HALE, LLP  
Post Office Box 7068  
Pasadena, CA 91109-7068  
(626) 795-9900

Applicant or Patentee : Yochay Danziger et al.

Application or Patent No. : To Be Assigned

Filed or Issued : To Be Assigned

Entitled : OPTICAL RESONATORS WITH DISCONTINUOUS PHASE  
ELEMENTS

**VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS  
(37) CFR 1.9(f) & 1.27(c) - SMALL BUSINESS CONCERN**

I hereby declare that I am

☒ the owner of the small business concern identified below:

☒ an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF SMALL BUSINESS CONCERN : Yeda Research and Development Co. Ltd.

ADDRESS OF SMALL BUSINESS CONCERN : P.O. Box 95, 76100 Rehovot, Israel

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 CFR 121.12, and reproduced in 37 CFR 1.9(d), for the purposes of paying reduced fees to the United States Patent and Trademark Office, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention entitled **OPTICAL RESONATORS WITH DISCONTINUOUS PHASE ELEMENTS** by inventor(s) described in

☒ the specification filed herewith

Application No. \_\_\_\_\_ filed \_\_\_\_\_

Patent No. \_\_\_ issued \_\_\_

If the rights held by the above identified small business concern are not exclusive, each individual, concern or organization having rights in the invention is listed below\* and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d), or a nonprofit organization under 37 CFR 1.9(e). \*NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

NAME :

ADDRESS :

\_\_\_ INDIVIDUAL \_\_\_ SMALL BUSINESS CONCERN \_\_\_ NONPROFIT ORGANIZATION

**VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS  
(37) CFR 1.9(f) & 1.27(c) - SMALL BUSINESS CONCERN**

**Docket No.: 36256/DBP/C608**

NAME :

ADDRESS :

☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING X: Paulina Ben-Ami

TITLE OF PERSON IF OTHER THAN OWNER X: Vice President

ADDRESS OF PERSON SIGNING X: P.O.Box 95, Rehovot 76100, Israel

SIGNATURE X Paulina Ben-Ami DATE X 29 November 1999

DBP/sfc

SFC PAS213728.1-\*10/20/99 11:21 AM

**YEDA**  
RESEARCH AND DEVELOPMENT  
CO. LTD.

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Yochay Danziger, et al.  
Application No. : 09/403,472  
Filed : October 22, 1999  
Title : OPTICAL RESONATORS WITH  
DISCONTINUOUS PHASE  
ELEMENTS

Grp./Div. : Not Yet Assigned  
Examiner : Not Yet Assigned

Docket No. : 36256/DBP/C608

## VERIFIED STATEMENT CLAIMING SMALL ENTITY STATUS

Assistant Commissioner for Patents  
Washington, D.C. 20231

Post Office Box 7068  
Pasadena, CA 91109-7068  
February 8, 2000

Commissioner:

Enclosed is a Verified Statement (Declaration) Claiming Small Entity Status - Small Business Concern signed on behalf of Yeda Research and Development Co. Ltd. concerning the subject application.

Accompanying this document is an assignment signed by two of the three inventors namely, Messrs. Asher Freisem and Ram Oron who assigned their rights over to Yeda Research and Development Co. Ltd. Also accompanying these documents is a copy of a Petition, which is attached thereto as Exhibit A, in which it is noted that Mr. Danziger, a citizen of Israel, entered into an assignment on September 2, 1997, assigning his rights along with that of a Professor Freisem over to Yeda Research and Development Co. Ltd. Therefore, Yeda owns all rights to this application. Accordingly,

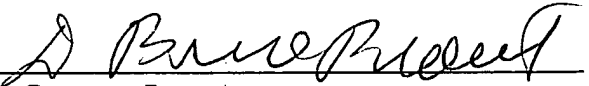
*This paper or fee is being deposited with the  
United States Postal Service "Express Mail  
Post Office to Addressee" under 37 CFR § 1.10  
Mailing Label No. EM34113024145*

Application No. 09/403,472

it is requested that this application be assigned small entity status.

Respectfully submitted,

CHRISTIE, PARKER & HALE, LLP

By 

D. Bruce Prout  
Reg. No. 20,958  
626/795-9900

DBP/plg/djp

Enclosures: Small Business Concern

Copy of US Assignment

Copy of Petition Under Section 1.47 (w/Exhibit A)

DJP PAS230593:1-\* -2/3/00 4:27 PM



Return to:  
CHRISTIE, PARKER & HALE  
Post Office Box 7068  
Pasadena, CA 91109-7068

**ASSIGNMENT**

In consideration of good and valuable consideration, the receipt of which is hereby acknowledged, the undersigned,

(1) Yochay Danziger; Asher A. Friesem; and Ram Oron

HEREBY SELL(S), ASSIGN(S) AND TRANSFER(S) TO

(2) Yeda Research and Development Co. Ltd.

having a place of business at

(3) P.O. Box 95, 76100 Rehovot, Israel

(hereinafter called "ASSIGNEE") the entire right, title and interest in and to any and all improvements which are disclosed in the application for United States Letters Patent entitled

(4) OPTICAL RESONATORS WITH DISCONTINUOUS PHASE ELEMENTS

which application was:

(a) executed by the undersigned on (5a): \_\_\_\_\_

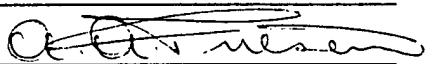

(b) filed on (5b): October 22, 1999

and assigned Application No.: 09/403,472

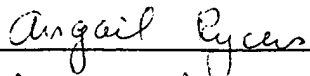
including any and all United States Patents which may be granted on said application, and any and all extensions, divisions, reissues, substitutes, renewals or continuations of said application and patents, and the right to all benefits under all international conventions for the protection of industrial property and applications for said improvements.

It is hereby authorized and requested that the Commissioner of Patents issue any and all of said Letters Patent, when granted, to said ASSIGNEE, its assigns or its successors in interest or its designee.

Upon said consideration, it is further agreed that, when requested, without charge to but at the expense of said ASSIGNEE, the undersigned will execute all divisional, continuing, substitute, renewal, and reissue patent applications; execute all rightful other papers; and generally do everything possible which said ASSIGNEE shall consider desirable for aiding in securing and maintaining patent protection as provided herein.

INVENTOR(S)	SIGNATURE	DATE
<u>Yochay Danziger</u>	X _____	X _____
<u>Asher A. Friesem</u>	X <u></u>	X <u>Nov. 17/99</u>
<u>Ram Oron</u>	X <u></u>	X <u>Nov 17, 1999</u>

**WITNESSES:**

X 

X 